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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,133	01/05/2001	Yuji Yagi	MEIC:053A	6471

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EXAMINER

CHANG, RICK KILTAE

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 12/07/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,133

Applicant(s)

Osaka-shi et al

Examiner

Rick K. Chang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-34 is/are pending in the application.
- 4a) Of the above claim(s) 27, 28 and 32-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-26 and 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/332,968.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species I, claims 24-26 and 29-31 in Paper No. 5 is acknowledged.

Applicant's traverse of the requirement for election of species is noted, asserting that all of Species I-III are sufficiently related that a thorough and complete search for Species I would necessarily encompass a thorough and complete for Species II and III. The traverse has been carefully considered, but is not persuasive because the reasons proffered do not appear germane to the propriety of a requirement for election of species. The sections of the manual cited relate to restriction, not a requirement for election of species, which is clearly covered in section 808.01(a). Once the claims are determined to be directed to mutually patentable inventions and the Office requires an election of species, a persuasive traverse is an admission on the record that applicant does not find the claimed species are patentable, one over the other. Having not done so, the reasons presented are not persuasive. Applicant is not entitled to examination of multiple independent inventions in one application. Moreover, examination of the independent inventions herein would clearly present a burden because the searches will not be coextensive. Accordingly, the requirement is repeated and made final. Species II and III will be combined if applicant will stipulate that they are obvious over each other.

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Art Unit: 3729

3. The abstract of the disclosure is objected to because the abstract does not describe a method of manufacturing a circuit board and a semiconductor device sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claims are objected to because of the following informalities:

Claims 25-26 and 30-31, line 1: amend “a” to –the--.

Claim 26, line 2: amend “additionally” to –further--.

Claim 26, line 4 and claim 31, line 6: amend “desired” to –predetermined— to avoid confusion with “desired locations” in claim 24, line 3.

Claim 29: line 4, insert –first-- after “plurality of” and in line 5, insert –second-- after “the”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3729

Claim 26, line 9: the limitation "the board" renders the claim vague and indefinite. The disclosure states that the conductive material is transferred to the substrate to form the circuit board. The limitation should be amended to --the substrate-- to conform to the disclosure.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 24-26 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohri et al (US 6,132,543) in view of Covell, II et al (US 5,718,367)

Re claims 24 and 29: Mohri discloses forming the wiring patterns on a circuit board (Figs. 3-5); and coupling electrically the circuit board and electrodes on a semiconductor chip component (Fig. 15).

Mohri fails to disclose simultaneously and unitarily forming the protrusions along with the wiring patterns.

Covell discloses simultaneously and unitarily forming the protrusions (72) along with the wiring patterns (71) thereby improving the electrical connectivity between the wiring patterns and the mounting pads.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mohri by simultaneously and unitarily forming the protrusions along with the wiring patterns, as taught by Covell, for the purpose of improving the electrical connectivity between the wiring patterns and the mounting pads.

Art Unit: 3729

Re claims 25 and 30: Mohri fails to disclose that the wiring patterns and the protrusions are made of a same material.

Covell discloses that they are made of solder thereby reducing production cost.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mohri by manufacturing the wiring patterns and the protrusions with the same material, as taught by Covell, for the purpose of reducing production cost.

Re claims 26 and 31: Mohri discloses forming a first groove on a film (50); filling conductive material into the first groove (52); transferring the filled conductive material to the substrate (1); and firing (col. 7, line 7).

Mohri fails to disclose forming a second groove at a predetermined location in the first groove.

Covell discloses forming a second groove (locations of 70 and 72 in mold 53) at a predetermined location in the first groove (location of 71 in mold 53) thereby unitarily forming the mounting pads to the wiring patterns.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mohri by forming a second groove at a predetermined location in the first groove, as taught by Covell, for the purpose unitarily forming the mounting pads to the wiring patterns.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (703) 308-4784. The examiner can normally be reached on 5:30 AM to 1:30 PM.

Application/Control Number: 09/754,133
Art Unit: 3729

Page 6

A handwritten signature in black ink, appearing to read 'Rick K. Chang'.

Rick K. Chang
Examiner
Art Unit 3729

RC
December 3, 2001